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10/071,135	02/06/2002	Jose Merino-Lopez	A33384-A	2661
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FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER MAKI, STEVEN D	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,135

Applicant(s)

MERINO-LOPEZ ET AL.

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21,30 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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- 1) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 2) Claims 30 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claim 30, subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of all of the first tread elements are "substantially similar" elements. The original disclosure fails to reasonably convey characterizing the first elements as being "substantially similar". The original disclosure fails to define "substantially similar". Applicant refers to paragraph 77 and figure 10 for support. This part of the disclosure describes using the same first elements instead of "substantially similar" first tread elements.

As to claim 31, subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of the second tread element sliding "substantially less". The original disclosure fails to reasonably convey forming the

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second element such that it slides "substantially less" than the first tread element. The original disclosure does not define "substantially less" sliding. Applicant refers to paragraph 69 for support. This part of the specification describes only small parts of the remainder of the tread sliding too small to provide an exploitable measurement for arriving at the friction potential instead of the second tread element sliding "substantially less" than the first tread element.

- 3) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 4) Claims 30 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 30, the scope and meaning of "substantially similar" tread elements is unclear; the original disclosure providing no guidance as to the meaning of "substantially similar".

As to claim 31, the scope and meaning of the second tread element sliding "substantially less" than the first tread element is unclear, the original disclosure providing no guidance as to the meaning of "substantially less" sliding. For example, do the second tread elements slide 55% less?

- 5) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

German '917

7) **Claims 1-4, 6-10, 19-20 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by German '917 (DE 3939917).**

German '917 discloses a vehicle tire 12 having a tread (tire profile) 11 and a multiplicity of measuring knobs (tread elements) 10 wherein a "sensor" 20 is embedded within the knob (tread element) 10 as shown in figure 2 so that (1) sensor unit 16 can detect those measuring knobs (tread elements) which slip (slide) during the rolling of the tire and (2) the momentary friction between the tire 12 and road surface (carriageway surface) 14 can be calculated so as to determine the instantaneous adhesion between the tire and road surface.

As to claim 1, 19, 20 and 30-31, the claimed tire is anticipated by German '917's tire. The claimed sensor reads on sensor 20. The claimed first tread element reads on the measuring knob (tread element) having the sensor therein. The claimed second tread element reads on another one of the measuring knobs (another one of the tread elements).

Applicant states: "German '917 discloses a tire having a plurality of measuring knobs to which a defined coefficient of friction is assigned by virtue of their geometric

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shape. The measuring knobs are capable of beginning to slide or slip at various different values of adherence on the road". (page 10 of response filed 10-19-04). With respect to claims 1 and 31, it is clear from applicant's description of German '917 that German '917 has "different" measuring knobs ("different" tread elements) wherein during rolling of the tire one measuring knob (a first tread element) can slide whereas another measuring knob (a second element) does not slide ("slides substantially less"). As to claim 30, note German '917's teaching to use a multiplicity of measuring knobs.

Applicant's argument that German '917 uses multiple measuring knobs whereas Applicant's invention does not is not commensurate in scope with the claims and is therefore not persuasive since none of the claims are limited to the tire having only one first tread element.

Applicant's argument that the approach of German '917 is flawed because the actual coefficient of friction is parameter of two elements which must be taken together is not commensurate in scope with the claims since none of the claims exclude such subject matter.

After acknowledging that German '917's sensor detects whether the measuring knob is or is not sliding / slipping, applicant argues German '917's "measuring knobs" do not make a "measurement" per se. In response, the examiner makes the following comments: A "sensor capable of making a measurement of at least a tangential force [singular] in the contact surface of the first tread element during its passage through the contact surface" reads on German '917's sensor which "measures" a tangential force in the contact surface of the measuring knob (first tread element) - this tangential force

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being the force causing the measuring knob to slip. The claimed sensor fails to require for example the capability of generating signals representing measuring tangential forces in units of daN/cm².

As to claims 2-4, note German '917's teaching that the measuring knobs have "different frictional coefficients".

As to claim 6, more than one measuring knob is provided.

Claims 7-10 read on German '917's measuring knob having the centrally located sensor. Claims 7-10 fail to require the central zone and encircling zone to have different compositions or be differentiated by structure such as a cutout.

8) Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over German '917.

As to claim 30, it would have been obvious to use "substantially similar" first tread elements in view of German '917's teaching to use a multiplicity of measuring knobs. The tread elements are "substantially similar" because they are each knobs. They are also "different" because they slip /slide at various values as noted by applicant.

9) Claims 1, 6, 18-21 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over German '917 in view of Becherer.

Claim 1 is considered to be anticipated by German '917. In any event: As to claims 1, 6, 19-20 and 30-31, it would have been obvious to one of ordinary skill in the art to use German '917's measuring knobs each of which has a sensor embedded therein (first tread elements) in combination with tread lugs which do not have sensors

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(second tread elements which are "different" from the first tread elements) since (1) German '917, directed to determining friction conditions between a tire and a road surface, teaches incorporating the sensor containing measuring knobs in a tire tread and (2) Becherer, also directed to determining friction conditions between a tire and a road surface, teaches providing at least one tread lug (tread element) with a sensor; the remaining tread lugs thereby not having sensors therein. One of ordinary skill in the art would readily appreciate that the tread elements not having the sensors therein would not slide since the only sliding tread elements desired by German '917 are those with the sensors.

Applicant's argument that there is no reason to combine German '917 and Becherer is not persuasive since both German '917 and Becherer are directed to using sensors in tread elements of tread in order to determine friction between the tire and the road and Becherer suggests that it is unnecessary to locate sensors in all of the tread elements of a tread. In other words, Becherer's teaching to determine friction for less than all of the tread elements fairly suggests using German '917's measuring knobs in less than all of the tread elements of the tread (e.g. use German '917's sensors in tread elements at only a central zone of the tread).

As to claim 18, it would have been obvious to use a sufficient number of measuring knobs such that there is always one in the contact zone (footprint) in view of German '917's teaching that the friction conditions are determined when the measuring knob is in the contact zone / footprint.

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As to claim 21, it would have been obvious to use a device(s) with Hall effect as the sensor in the measuring knob since Becherer teaches that Hall sensors are known sensors for determining friction conditions for a tire tread.

10) Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over German '917 in view of Becherer as applied above and further in view of Oubridge (US 3364965), Knill (US 4319620) or Japan '807 (JP 61-263807).

As to claims 2-4, it would have been obvious to one of ordinary skill in the art to use the claimed different materials for the tread elements in German '917's tread, which as noted above comprise measuring knobs having different frictional coefficients, in view of Oubridge, Knill or Japan '807's teaching to use different materials for tread elements of a tread so as to improve properties such as coefficient of friction, rolling resistance and steering stability respectively.

11) Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over German '917 in view of Becherer as applied above and further in view of Japan '802 (JP 62-6802) or Kukimoto et al (US 5445201).

As to claim 5, it would have been obvious to one of ordinary skill in the art to locate the sensor in a low height tread element in view of Japan '802's teaching to use a low height tread element 11 to improve tractional performance or Kukimoto et al's teaching to use a low height tread element (e.g. low height rib 3) to improve uneven wearing.

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Brazil

12) **Claims 7-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brazil (Brazil 200002924) in view of Japan '807, Japan '321 (JP 6-171321) or Japan '918 (JP 8-118918).**

Although Brazil is not available as prior art against claims 1-6, 18-21 and 30-31 (these claims are entitled to the benefit of the filing date (8-10-00) of the parent application 09/636566 which is before the publication date (10-17-00) of Brazil), Brazil is available as prior art under 35 USC 102(b) against claims 7-17. With respect to Brazil being published 10-17-00, this application is a CIP of the parent application. Claims 7-17 are not entitled to the benefit of the filing date (8-10-00) of the parent application 09/636,566 since each of claims 7-17 are not directed solely to the subject matter disclosed in the parent application. The subject matter of claims 7-17 was first introduced in this CIP application. Accordingly, the filing date of claims 7-17 is 2-6-02 (the filing date of this CIP application).

Brazil discloses a tire having a sacrificed rib (first tread element) 1 and an ordinary rib (second tread element) 2 wherein the sacrificed rib (first tread element) slides against the ground while the ordinary rib (second tread element) does not slide against the ground. The first tread element includes a sensor for measuring stresses in the longitudinal direction. See English translation of Brazil provided by applicant. Hence, Brazil teaches a first element which slides and a second tread element which does not slide as now required by claim 1. Brazil does not recite providing the first tread element as a central zone surrounded by an encircling zone.

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Japan '807, Japan '321 and Japan '918 are applied in the alternative since (1) Japan '807 differentiates the central and encircling zones using composition (similar to applicant's figure 5 embodiment), (2) Japan '321 differentiates the central and encircling zones using an annular cutout (similar to applicant's figure 6 embodiment), and (3) Japan '918 differentiates the central and encircling zones using wells (similar to applicant's figure 4 embodiment).

As to claims 7-17, it would have been obvious to one of ordinary skill in the art to form an encircling zone and central zone as claimed wherein the central zone has Brazil's sensor in view of Japan '807, Japan '321 or Japan '918's teaching to form a land portion in a tread having an encircling zone and central zone for improving steering stability, improving traveling stability and preventing wear respectively. As to claim 12, note the annular cutout (thin recess strip) suggested by Japan '321. As to claim 17, it would have been an obvious alternative to incline the annular cut since it is taken as well known / conventional per se to orient an annular slit such that the walls are inclined instead of perpendicular to the tread surface. As to claim 13, note the wells suggested by Japan '918. As to claim 14, it would have been an obvious alternative to incline the wells since it is taken as well known / conventional per se to orient wells (holes) such that they are at 90 degrees or inclined with respect to the tread surface. As to claim 15, Japan '807 suggests using different compositions.

Remarks

13) Applicant's arguments filed 10-19-04 have been fully considered but they are not persuasive. Applicant's arguments are addressed above.

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The certified English translation of applicant's priority document France 01/01672 filed 2-7-01 has been received. With respect to claims 7-17, applicant has perfected his 119 foreign priority claim and, consequently, Europe 1076235 published 2-14-01 has been removed as prior art.

14) No claim is allowed.

15) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

16) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
January 23, 2005


STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
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1-23-05